WSDOT WETLAND DELINEATION STANDARD OPERATING PROCEDURES

WSDOT Updated 8/16/06

Wetland biologists doing work for WSDOT should direct all technical questions related to wetland delineations to the WSDOT Wetland Project Contact (Project Contact), the regional or headquarters' wetland biologist designated contact for the project. Project engineers can provide answers to project related questions, such as project descriptions and construction techniques.

Qualified wetland biologists must complete the following for each project, unless instructed otherwise by the WSDOT Wetland Project Contact:

- *Delineation Assignment*— Verify study area with project contact based on the scope of work. Identify which highway, which side(s) of the road, the starting and ending point(s), and the distance from the center line to search for and delineate wetlands. Identify what report(s) will be the end product (delineation report, wetland/biology report, wetland discipline report, etc.) and do only the work *required* for that product.
- *Access*—If applicable, have the Project Contact obtain written permission to enter private property, and carry permission in the field.
    - *Background information*— Plan fieldwork so that all necessary background information can be obtained ahead of time, if possible. Before going into the field, become familiar with the area through relevant background information such as project plans, aerial photos, National Wetland Inventory (NWI) maps, Soil Surveys, County Hydric Soils Lists, topographic maps, precipitation data, local critical area ordinances, Department of Natural Resources natural heritage data, GIS data, previous fieldwork notes, etc. If possible, take along a folder with all background information into the field.
- *Field data points (soil pits)*— WSDOT requires field visits for all wetland delineations; office delineations using only GIS and NWI maps are not acceptable. Follow the delineation protocol as described in the Washington State Wetlands Identification and Delineation Manual and the NRCS Field Indicators of Hydric Soils in the United States. The three-parameter approach requires evidence of wetland vegetation, soils, and hydrology to meet the criteria for a wetland. Dig a soil pit for each data point with a minimum depth of 16 inches. Describe the soil throughout the entire zone of the soil profile according to the Washington State Wetlands Identification and Delineation Manual. Record hydrology and vegetation data for each data point according to the manual as well.

  When doing a routine delineation of small wetlands, document a minimum of one wetland and one upland data point, in which soil, hydrology, and vegetation are described on a Data Form, even though the three parameters (including digging soil pits) may be investigated at many locations. Additionally, at least one extra wetland data point must be documented on a data sheet for each different wetland type present (emergent, scrub-shrub, forested, etc.). For difficult and/or large sites, talk to the Project Contact to see roughly how many additional data points would be appropriate to document for the site.

- *Flagging*— Clearly identify all documented data points and wetland boundary points with alphanumerically marked flagging. While conducting the delineation, label and refer to wetlands consistently according to WSDOT naming convention, which includes an alphabetical identifier for each wetland and sequentially numbered wetland delineation flagging. For example, flagging for Wetland A would be labeled A-1, A-2, A-3, etc. Use wetland flagging that is a solid pink, orange, blue, or white color, unless directed otherwise. To avoid confusion and eliminate potential problems in subsequent wetland boundary surveys, mark documented data points with a different color of flagging and different lettering system than wetland boundary points, but still with the wetland number (for example, data point flagging for Wetland A would be DP:A-1, DP:A-2, etc.). Attach flagging to fixed objects such as survey stakes, woody vegetation, or pin flags that are within easy sight distance of each other. Indicate the location of each flag and their letters/numbers on an aerial photograph, plan sheet, or sketch map for reference by WSDOT survey crews. Inform the Project Contact when you are finished delineating and provide them with the map of your documented data points as soon as possible to minimize delay to the survey crew.
- *Field notes*— Take detailed field notes. Record enough data to discuss the following points in a written report:
    - Date, weather conditions, location of the wetland (GPS point, or marked on aerial photos/ hand-drawn map), etc.
    - Field observations of the hydrology (sources, depth to saturation and or standing water in soil pit, areas of inundation, hydrologic connection(s) to other wetlands or downstream aquatic resources, etc.)
    - Approximate total size of the wetland
    - Justification that was used to determine whether a given wetland is a separate wetland or part of a larger system because it is divided by a road, etc. When determining whether to lump or split wetland areas, use the criteria in the Department of Ecology's Washington State Wetland Rating System of Western Washington or Washington State Wetland Rating System for Eastern Washington.
    - Description of vegetation, soils, and hydrology indicators
    - Approximate percentage of area covered by each wetland community type (forested, scrub-shrub, emergent, etc.) as described in Washington State Wetland Rating System of Western Washington or Washington State Wetland Rating System for Eastern Washington
    - Characteristics of the uplands surrounding the wetland (land use, vegetated or not, etc.)
    - Wildlife usage observations
    - Any fill or other human disturbance

- *Photo documentation*— Take at least one picture for each delineated wetland and each data plot for documentation and for potential inclusion in reports. Include a picture of each delineated wetland in reports, unless otherwise directed.

- *Wetland Rating and Functions Assessment*— Perform wetland rating(s) and functions assessments for each wetland, usually during the same field visit as the delineation. Rate wetlands using the Department of Ecology's Washington State Wetland Rating System of Western Washington or Washington State Wetland Rating System for Eastern Washington. Also check the applicable county and/or city critical areas ordinance(s) to determine whether a local wetland rating system must also be applied in addition to the state system.

  Check with your Project Contact to see which functions assessment tool is to be used. The WSDOT Wetland Functions Characterization Tool for Linear Projects, also known as the Wetland Functions Best Professional Judgment (BPJ) Tool, is often applied to assess functions of wetlands occurring within highway rights-of-way and project areas. Alternatively, the information gathered to rate the wetland using the Washington State Wetland Rating Systems may be appropriate to help characterize the functions of the wetland in reports.